aquaria, all reusable labware was soaked in dilute bleach for 12 hr to destroy the cells and cysts, followed by thoroughly rinsing with deionized water.

D. Effects of Acute Exposure to the Toxic Alga on Fish Skin and Gill Tissues

Previous research on the effects of toxic dinoflagellates on fish populations have focused mainly on determining whether the alga can kill the population at risk. Toxins can also cause serious sublethal damage, however, which may render fish less biologically / ecologically "fit." Therefore, we examined impacts of dinoflagellate exposure on potential target tissues of representative finfish to gain understanding of the sequelae of toxin exposure. Gill and skin tissue were considered in this analysis because these tissues would have been in direct contact with the dinoflagellate's toxin. Cultured 1+ striped bass (*Morone saxatilis* Walbaum) were exposed to a blooming culture of toxic dinospores ($\geq$ 300 cells/mL) in 150-L (40 gal.) aquaria at 15‰ salinity and 19°C. Water quality conditions during two repeat-trial experiments were within acceptable ranges for fish growth (unionized ammonia at < 20 μg/L, nitrate at < 100 μg NO_3^-N/L, dissolved oxygen at saturation, and pH at 7.8-8.0). Ten fish were sampled just prior to death, and tissues were fixed for histology in 10% neutral buffered formalin. Tissues were processed routinely for analysis by light microscopy after staining with hematoxylin and eosin (Noga *et al.* 1993). Control fish were maintained under similar conditions but without exposure to the dinoflagellate, and their tissues were compared to tissues of the toxin-exposed fish.

In a separate experiment under similar conditions (also repeated once), we also examined effects of sublethal exposure to the toxic dinoflagellate by sampling fish at time intervals that were determined to be non-lethal to the fish. We first exposed 10 striped bass to toxic dinospores (> 300 cells/mL), then sacrificed 5 fish and placed the remaining 5 fish into a "recovery" aquarium without dinoflagellate blooms. None of the fish in the recovery aquarium died; hence, we could assume that the fish had been exposed to sublethal levels of toxin.

E. Optimal Physical Conditions for Toxic Activity

Preliminary experiments and observations established that this dinoflagellate is eurythermal, with demonstrated ability to kill across a wide temperature gradient. Nearly 2 yr of monitoring information (May 1991 - December 1992, encompassing two growing seasons in warm and unusually cold years, respectively -- NOAA 1993) indicated that maximal activity of the most lethal stage of this dinoflagellate -- namely, the flagellated